

REMARKS

Applicants have amended their claims herein to better clarify the invention. Claims 1, 11, and 21, are amended herein to provide that each of said plurality of host computers assigned to an (i)th host computer group is not assigned to any other of the (N) host computer groups. Support can be found in the Specification on Page 21 at Lines 1-4.

Claims 1, 11, and 21, are further amended herein to provide that each of said logical volumes assigned to an (i)th logical volume group is not assigned to any other of the (N) logical volume groups. Support can be found in the Specification on Page 21 at Lines 9-10.

Claims 1, 11, and 21, are further amended herein to provide that a host computer assigned to an (i)th host computer group has access rights to logical volumes assigned to an (i)th logical volume group. Support can be found in the Specification on Page 21 at Lines 11-12.

Claims 21 is amended herein to recite a computer program product encoded in an information storage medium. Support can be found in the Specification on Page 35 at Lines 4-17.

No new matter has been entered. Reexamination and reconsideration of the application, as amended, is respectfully requested.

Claims 3, 5-7, 15-17, and 25-27, stand rejected under 35 USC 112, second paragraph, due to a "unassigning" claim element. These rejections are cured herein by replacing "unassigning" with --unassigning--.

Claims 5-6, 15-16, and 25-26, stand rejected under 35 USC 112, second paragraph, for reciting a "PPRC" claim element. These rejections are cured herein by specifying that "PPRC"

stands for --peer-to-peer remote copy--.

Claims 7, 17, and 27, stand rejected under 35 USC 112, second paragraph, for reciting a "XRC" claim element. These rejections are cured herein by specifying that "XRC" stands for --extended remote copy--.

Claims 1, 11, and 21, stand rejected under 35 U.S.C. 102(b) as being anticipated by Nakamura et al. (U.S. Pub. No 2002/0078296).

Claims 1-4, 11-14, and 21-24, stand rejected under 35 U.S.C. 102(b) as being anticipated by NPL entitled "HP-UX 10.0 Logical Volume Manager White Paper" (Hewlett-Packard).

Claims 5-7, 15-17, and 25-27, stand rejected under 35 U.S.C. 103(a) as being unpatentable over Hewlett-Packard in view of Atkin (U.S. Pat. No. 6,145, 066).

Claims 8, 18, and 28, stand rejected under 35 U.S.C. 103(a) as being unpatentable over Hewlett-Packard in view of Tremain (U.S. Pub. No. 2002/0069369).

Claims 9-10, 19-20, and 29-30, stand rejected under 35 U.S.C. 103(a) over Hewlett-Packard in view of Mokryn et al.

"A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of Cal.*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed.Cir. 1987); MPEP 2131. Moreover, "[t]he identical invention must be shown in as complete detail as is contained in the . . . claim." *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed.Cir. 1989).

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Nakamura et al. nowhere teach a method, computer readable program code implementing that method, or a computer program product encoding that method, wherein the method, *inter alia*, forms (N) host computer groups, forms (N) logical volume groups, wherein each of a plurality of host computers assigned to an (i)th host computer group is not assigned to any other of (N) host computer groups, and wherein each of the logical volumes assigned to an (i)th logical volume group is not assigned to any other of the (N) logical volume groups, and wherein a host computer assigned to an (i)th host computer group has access rights to logical volumes assigned to an (i)th logical volume group, as recited by claims 1, 11, and 21, as amended herein.

Nakamura et al. actually teaches away from claims 1, 11, and 21, as amended herein. "A reference may be said to teach away when a person of ordinary skill, upon reading the reference, would be discouraged from following the path set out in the reference, or would be led in a direction divergent from the path that was taken by the applicant." *In re Gurley*, 27 F.3d 551, 553 (Fed. Cir. 1994); see *KSR*, 127 S. Ct. at 1739-40 (explaining that when the prior art teaches away from a combination, that combination is more likely to be nonobvious).

In FIG. 1, Nakamura et al. expressly teach use of a single volume group comprising all p-VOLs 108 and all s-VOLs 111. Nakamura et al. expressly define a volume group as comprising a grouping of paired volumes. Abstract, Paragraph [0006], Paragraph [0008], Paragraph [0010], Paragraph [0020].

The Examiner posits that Nakamura in FIG. 1 teaches use of two host computer groups, wherein "computers 102 and 105 are assigned to group 101, similarly computers 104 and 106 are assigned to group 103." June 9, 2008 Office Action at Page 4. Therefore, Nakamura et al.

in FIG. 1 teach use of 2 host computer groups and one logical volume group. On the other hand, Applicants' claims 1, 11, and 21, require the same number of host computer groups and logical volume groups, namely (N) host computer groups and (N) logical volume groups.

Hewlett-Packard fails to cure the deficiencies of Nakamura et al. Hewlett-Packard nowhere teaches a method, computer readable program code implementing that method, or a computer program product encoding that method, wherein the method, *inter alia*, forms (N) host computer groups, forms (N) logical volume groups, wherein each of a plurality of host computers assigned to an (i)th host computer group is not assigned to any other of (N) host computer groups, and wherein each of the logical volumes assigned to an (i)th logical volume group is not assigned to any other of the (N) logical volume groups, and wherein a host computer assigned to an (i)th host computer group has access rights to logical volumes assigned to an (i)th logical volume group, as recited by claims 1, 11, and 21, as amended herein. Applicants respectfully submit that claims 1, 11, and 21, are patentable over the either the teachings of Nakamura et al. and/or Hewlett-Packard.

Claims 2-4, as amended herein, depend, directly or indirectly, from claim 1, as amended herein. Under 35 U.S.C. § 112, fourth paragraph, "a claim in dependent form shall be construed to incorporate by reference all the limitations of the claim to which it refers." Because neither Nakamura et al., nor Hewlett-Packard, teach all the elements of claims 2-4, Applicants respectfully submit that claims 2-4, as amended herein, are patentable over the teachings of Nakamura et al., and over the teachings of Hewlett-Packard.

Claims 12-14, as amended herein, depend, directly or indirectly, from claim 11, as amended herein. Under 35 U.S.C. § 112, fourth paragraph, "a claim in dependent form shall be

construed to incorporate by reference all the limitations of the claim to which it refers.”

Because neither Nakamura et al., nor Hewlett-Packard, teach all the elements of claims 2-4, Applicants respectfully submit that claims 12-14, as amended herein, are patentable over the teachings of Nakamura et al., and over the teachings of Hewlett-Packard.

Claims 22-24, as amended herein, depend, directly or indirectly, from claim 21, as amended herein. Under 35 U.S.C. § 112, fourth paragraph, “a claim in dependent form shall be construed to incorporate by reference all the limitations of the claim to which it refers.”

Because neither Nakamura et al., nor Hewlett-Packard, teach all the elements of claims 2-4, Applicants respectfully submit that claims 22-24, as amended herein, are patentable over the teachings of Nakamura et al., and over the teachings of Hewlett-Packard.

In *KSR International Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 167 L. Ed. 2d 705 (2007), the Supreme Court held that the obviousness analysis of *Graham v. John Deere Co. of Kansas City*, 383 U.S. 1, 86 S. Ct. 684, 15 L. Ed. 2d 545 (1966), controls an obviousness inquiry. The *Graham* obviousness factors include “the scope and content of the prior art” and the “differences between the prior art and the claims”. *KSR*, 127 S. Ct. at 1734 (quoting *Graham*, 383 U.S. at 17-18).

Atkin, Tremain, or Mokryn et al., fail to cure the deficiencies of Nakamura et al. and Hewlett-Packard. Applicants respectfully submit that no combination of Nakamura et al., Hewlett-Packard, Atkin, Tremain, or Mokryn et al., teach or suggest a method, computer readable program code implementing that method, or a computer program product encoding that method, wherein the method, *inter alia*, forms (N) host computer groups, forms (N) logical volume groups, wherein each of a plurality of host computers assigned to an (i)th host

computer group is not assigned to any other of (N) host computer groups, and wherein each of the logical volumes assigned to an (i)th logical volume group is not assigned to any other of the (N) logical volume groups, and wherein a host computer assigned to an (i)th host computer group has access rights to logical volumes assigned to an (i)th logical volume group, as recited by claims 5-10, 15-20, and 25-30, as amended herein. This being the case, Applicants respectfully submit that claims 5-10, 15-20, and 25-30, as amended herein, are patentable over any combination of Nakamura et al., Hewlett-Packard, Atkin, Tremain, and/or Mokryn et al.

Having dealt with all of the outstanding objections and/or rejections of the claims, Applicants submit that the application as amended is in condition for allowance, and an allowance at an early date is respectfully solicited. In the event there are any fee deficiencies or additional fees are payable, please charge them, or credit an overpayment, to our Deposit Account No. 170055.

Respectfully submitted,

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